

**REMARKS**

With entry of this Amendment, claims 1, 6-9, and 40 are pending and under examination. Applicants canceled claim 39 without prejudice or disclaimer of the subject matter of that claim. Applicants amended claim 40 to recite "A composition . . . wherein the composition contains 1% to 10% by weight of the purine nucleic acid-substance per total weight of the composition, and 0.01 to 1 part by weight of the pyrimidine nucleic acid-substance per part by weight of the purine nucleic acid-substance." Support for the amendment to claim 40 can be found throughout the specification, for example, at page 17, line 4; page 14, line 6; page 11, lines 20-22; page 17, lines 7-16; and page 25, line 23 to page 26, line 7. Applicants believe that this amendment does not introduce new matter.

Applicants acknowledge with appreciation the Office's withdrawal of the prior nonstatutory-type double patenting rejection, the withdrawal of the rejections of claim 39 under 35 U.S.C. § 112, first and second paragraphs, and the withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b). Claims 1, 6-9, 39, and 40 remain rejected by the Office under 35 U.S.C. § 102 or § 103. Applicants address these rejections below.

Applicants would like to thank Examiner Karol and Examiner Chong for the telephonic interview of February 19, 2010. The substance of this interview is reflected in the remarks below.

**Rejection Under 35 U.S.C. § 102**

Claim 40 stands rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent 5,066,500 (Gi) as allegedly evidenced by U.S. Application 2002/0141955

A1 (*Zimmerman*). Office Action at 4. According to the Office, *Gil* teaches a “ratio of adenosine monophosphate to uridine monophosphate [that] is 1:1 . . . .” *Id.* at 5. The Office also relies on *Gil*’s alleged teaching of “non-milk based infant formulas and nutritionally balanced diet formulations comprising nucleosides and/or nucleotides . . . preferably . . . cytidine monophosphate (CMP), guanosine monophosphate (GMP), inosine monophosphate (IMP), adenosine monophosphophate (AMP) and uridine monophosphate (UMP).” *Id.* at 4-5. Furthermore, the Office also asserts that *Zimmerman* teaches ascorbyl palmitate as a skin whitening agent. Applicants traverse.

To establish anticipation under 35 U.S.C. § 102, the Office must show that a reference teaches, either expressly or inherently, each and every element of a claim. See M.P.E.P. § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). A rejection under § 102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. See *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972).

Solely to facilitate prosecution and without acquiescing to the rejection, Applicants amended claim 40 to recite a composition that contains “1% to 10% by weight of the purine nucleic acid-substance per total weight of the composition.” *Gil* does not teach or suggest a composition that contains “1% to 10 % by weight of the purine nucleic acid-substance,” as recited in claim 40. Thus, *Gil* does not teach each and every element of claim 40 and cannot anticipate this claim. Applicants, therefore, request that the Office withdraw this rejection of claim 40 35 U.S.C. § 102(b) in view of *Gil* and *Zimmerman*.

Rejection Under 35 U.S.C. § 103

The Office rejects claims 1, 6-9, and 39 under 35 U.S.C. § 103(a) as allegedly obvious over *Gil* in view of *Zimmerman*, applying these references as discussed above for claim 40. The Office acknowledges, however, that *Gil* and *Zimmerman* “do not exemplify a composition comprising between 1% to 10% by weight of AMP.” Office Action at 7. *Id.* Moreover, referring to Table III, the Office alleges that *Gil* discloses compositions that include “from 1 to 300 mg/100 mg for adenosine monophosphate . . . (i.e. 1% to 3% by weight) . . . .” *Id.* The Office also alleges that “one of ordinary skill in the art would have been motivated to optimize the amount of AMP to provide the desired nutritional profile.” *Id.* According to the Office, one of ordinary skill in the art would have had a reasonable expectation of success because *Gil* teaches that “the range of AMP in nutritionally balanced diets overlaps with the range of AMP as claimed.” *Id.* As indicated above, claim 39 has been canceled. Thus, Applicants address this rejection with respect to claims 1 and 6-9, which are still pending.

As Applicants explain below, column 2 of Table III, on which the Office relies, contains a typographical error. Specifically, for the following reasons Applicants contend that the range of nucleosides and/or nucleoside phosphate concentrations in a powdered product should be expressed in “mg/100 g” units, rather than in “mg/100 mg” units.

First, at col. 9, l. 67 to col. 10, l. 3, *Gil* discusses column 2 of Table III, explaining that “[o]n a dry weight basis the amount of nucleosides and/or nucleotides may each vary from about 1 to about 300 mg per 100 grams of product . . . .” Emphasis added.

This discussion of Table III shows that column 2 should recite "per 100 g" and not "per 100 mg."

Second, the concentration units of nucleosides and/or nucleoside phosphates are not presented anywhere else in the specification in "mg/100 mg" units, including in any of the 13 other tables and 11 examples. Rather, these other tables and the examples provide concentrations of nucleosides and/or nucleoside phosphates in "mg/100 g" units.

Third, if Table III were read as published, it would contain an internal disagreement among the concentration values provided in columns 1 and 2 of the table. Namely, the nucleosides and/or nucleoside phosphate concentrations contained in column 1 of Table III are "preferred" concentrations that are meant to be within the concentration ranges of column 2. However, the concentrations of column 1 as written in Table III would fall outside the range of the concentrations of column 2. See Table III of *Gil*. Indeed, column 1 of Table III, appears to provide a preferred concentration of 150 mg/100 g (0.15%), which does not fall within the alleged 1 mg/100 mg to 300 mg/100 mg (1.0 % to 300.0%) range cited by the Office. To be internally consistent and consistent with the specification as discussed above, Applicants believe that column 2 should be in "mg/100g" units. Accordingly, Applicants submit that the Office has relied on an error in Table III of *Gil* as an alleged basis for this rejection.

Given that *Gil* does not teach a range of 1% to 3% of AMP as suggested by the Office, it would not have been a matter of "optimizing" the amount of AMP taught in *Gil* because *Gil*'s range does not overlap the claimed range of AMP concentration. Indeed,

there is no teaching in *Gil* or *Zimmerman* to suggest that the skilled artisan should have looked at concentrations as recited in independent claim 1.

If anything, had one of ordinary skill in the art attempted “to optimize the amount of AMP to provide the desired nutritional profile [taught by *Gil*]” as the Office suggests (See Office Action at 8), the amount of AMP would have fallen well outside of the claimed range of purine nucleic acid-substance. Specifically, *Gil* appears to teach that “[t]he content of nucleosides and/or nucleotides in infant formulas of the present invention are *in the range of those for human milk.*” *Gil* at col. 8, ll. 65-67 (emphasis added). According to *Gil*, the amount of adenine in human milk is between 1.43 to 0.69 mg/dl (0.0014% to 0.0007%), and the amount of AMP is between 1.19 to 0.64 mg/dl (0.0012% to 0.0006%). See *Gil* at col. 8, ll. 57-63. Thus, if one of ordinary skill in the art were to follow *Gil*’s “desired nutritional profile” as the Office suggests, the artisan would not have arrived at the concentration range of a purine nucleic acid-substance recited in claim 1.

In sum, *Gil* does not teach a range of AMP concentration that overlaps with the concentration recited in independent claim 1, and, if anything, teaches away from the claimed concentration. The Office cited to *Zimmerman* only for its alleged teachings related to ascorbyl palmitate, which fails to cure the deficiencies of *Gil*. Neither *Gil* nor *Zimmerman*, taken alone or in combination, would have rendered claims 1 and 6-9 obvious. Accordingly, Applicants respectfully request the withdrawal of this rejection.

Conclusion

Applicants respectfully request that the Office enter this Amendment under 37 C.F.R. § 1.116, placing claims 1, 6-9, and 40 in condition for allowance. Applicants

submit that the proposed amendment of claim 40 does not raise new issues or necessitate the undertaking of any additional search of the art. Therefore, this Amendment should allow for immediate action by the Office.

Applicants also submit that the entry of this amendment would place the application in better form for appeal, should the Office dispute the patentability of the pending claims.

Applicants respectfully request the entry of this Amendment, the Office's reconsideration and reexamination of the application, and the timely allowance of claims 1, 6-9, and 40.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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